

MRID No. 444577-77

**DATA EVALUATION RECORD  
ALGAE OR DIATOM TIER I TEST  
GUIDELINE 122-2**

1. **CHEMICAL:** Prohexadione calcium **PC Code No.:** 112600

2. **TEST MATERIAL:** BAS 125 W **Purity:** 90.6%

3. **CITATION:**

**Authors:** S.G. Thompson, J.P. Swigert, D.W. Haughey, and J. Qiu

**Title:** BAS 125 W: A 5-Day Toxicity Test with the Marine Diatom (*Skeletonema costatum*)

**Study Completion Date:** January 23, 1997

**Laboratory:** Wildlife International Ltd., Easton, MD

**Sponsor:** BASF Corporation, Research Triangle Park, NC

**Laboratory Report ID:** 147A-145B

**DP Barcode:** D245631

**MRID No.:** 444577-77

4. **REVIEWED BY:** Mark A. Mossler, M.S., Toxicologist,  
Golder Associates Inc.

**Signature:** 

**Date:** 7/1/98

**APPROVED BY:** Pim Kosalwat, Ph.D., Senior Scientist,  
Golder Associates Inc.

**Signature:** P. Kosalwat

**Date:** 7/1/98

5. **APPROVED BY:**  10/21/98

**Signature:**

**Date:**

6. **STUDY PARAMETERS:**

**Definitive Test Duration:** 120 hours

**Type of Concentrations:** Mean measured

7. **CONCLUSIONS:** This study is scientifically sound and fulfills the guideline requirements for an algal toxicity test. Exposure for 120 hours to a mean measured BAS 125 W concentration of 1.1 mg ai/L (representative of the aquatic concentration equivalent to the maximum labeled use rate of 1.67 lb ai/A) did not affect the growth or reproduction of *S. costatum*.

**8. ADEQUACY OF THE STUDY:****A. Classification:** Core**B. Rationale:** N/A**C. Repairability:** N/A**9. GUIDELINE DEVIATIONS:** No deviations of consequence were noted.**10. SUBMISSION PURPOSE:****11. MATERIALS AND METHODS:****A. Test Organisms**

Guideline Criteria	Reported Information
<b>Species</b> <i>Skeletonema costatum</i> <i>Anabaena flos-aquae</i> <i>Selenastrum capricornutum</i> <i>Navicula pelliculosa</i>	<i>Skeletonema costatum</i>
<b>Initial Number of Cells</b> 3,000 - 10,000 cells/mL	10,000 cells/mL
<b>Nutrients</b> Standard formula, e.g. 20XAAP	Saltwater algal medium

**B. Test System**

Guideline Criteria	Reported Information
<b>Solvent</b>	None
<b>Temperature</b> <i>Skeletonema</i> : 20°C Others: 24-25°C	20.5-21.7°C
<b>Light Intensity</b> <i>Anabaena</i> : 2.0 KLux (±15%) Others: 4.0-5.0 KLux (±15%)	4.0 - 4.9 KLux

Guideline Criteria	Reported Information
<b><u>Photoperiod</u></b> Skeletonema: 14 h light, 10 h dark or 16 h light, 8 h dark Others: Continuous	16 hours light/8 hours dark
<b><u>pH</u></b> Skeletonema: approx. 8.0 Others: approx. 7.5	Initial 8.1 Final 9.0

**C. Test Design**

Guideline Criteria	Reported Information
<b><u>Dose range</u></b> 2X or 3X progression	N/A
<b><u>Doses</u></b> at least 5	1.2 mg active ingredient (ai)/L
<b><u>Controls</u></b> negative and/or solvent	Negative control
<b><u>Replicates per dose</u></b> 3 or more	3
<b><u>Duration of test</u></b> 120 hours	120 hours
<b>Daily observations were made?</b>	Yes
<b><u>Method of Observations</u></b>	Cellular counts
<b><u>Maximum Labeled Rate</u></b>	1.67 lb ai/A

**12. REPORTED RESULTS:**

Guideline Criteria	Reported Information
<b>Initial and 120 h cell densities were measured?</b>	Yes
<b>Control cell count at 120 hr &gt;2X initial count?</b>	Yes
<b>Initial chemical concentrations measured? (Optional)</b>	Samples collected at study initiation and termination were analyzed by HPLC

Guideline Criteria	Reported Information
Raw data included?	Yes

Dose Response

Mean Measured Concentration (mg ai/L)	Avg. Cell Density ( $\times 10^4$ cells/mL)	% Inhibition	120-Hour pH
Control	229	-	9.0
1.1	228	0.05	9.0

Other Significant Results: None reported.

Statistical Method: No statistical analyses were performed. It was simply stated that BAS 125 W at a concentration of 1.2 mg ai/L inhibited the growth of *S. costatum* by 0.05%.

13. VERIFICATION OF STATISTICAL RESULTS: It is apparent from the cell density values that the 5-day growth and reproduction of *S. costatum* was not affected by BAS 125 W at a mean measured concentration of 1.1 mg ai/L.
14. REVIEWER'S COMMENTS: This study is scientifically sound and fulfills the guideline requirements for an algal toxicity test. Exposure for 120 hours to a mean measured BAS 125 W concentration of 1.1 mg ai/L did not affect the growth or reproduction of *S. costatum*. This study can be categorized as **Core**.

PROHEXADIONE Calcium

DER MRLD 444577-77

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